LCD KVM Console (T1700/T1900)

User Guide
Release 1.1

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T1700_T1900-0H-v1.1-E

July 2012

255-37-0114-00

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Important Safeguards

Read all these instructions carefully before you use the device. Save this manual for future reference.

What the Warranty Does Not Cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
  - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - Repair or attempted repair by anyone not authorized by us.
  - Any damage of the product due to shipment.
  - Removal or installation of the product.
  - Causes external to the product, such as electric power fluctuation or failure.
  - Use of supplies or parts not meeting our specifications.
  - Normal wear and tear.
  - Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

Safety Instructions

- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40º Celsius (104º Fahrenheit).
- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
- When the drawer is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
- Arrange the equipment's power cord in such a way that others won't trip or fall over it.
- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labeled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
- Observe all precautions and warnings attached to the equipment.
- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
- Only qualified service personnel should open the chassis. Opening it yourself could irreparably damage the equipment and invalidate its warranty.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

Chapter 1 Introduction

The User Guide introduces the Raritan LCD KVM Console, a 1U rackmount LCD KVM drawer for use with the KVM switch or server in the data center, server room or the like. There are two types of the product: T1700 and T1900. These models are identical in almost every aspect except that T1700 comes with a 17" LCD monitor and T1900 comes with a 19" one.

In This Chapter

Package Content 1
Structure Diagram 2

Package Content

Raritan LCD KVM Console comes with the standard parts shown in this section. Check and make sure they are included and in good condition. If anything is missing, or damaged, contact the supplier immediately.

T1700

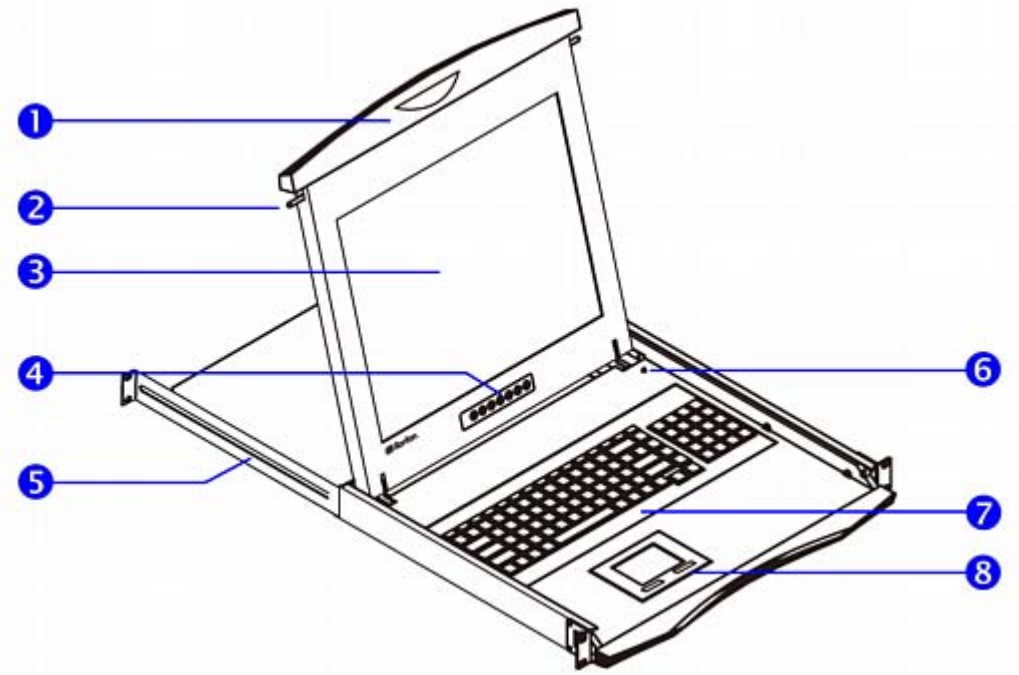
1. LCD KVM drawer x 1 pc
2. Fasteners for rear L-bracket x 4 pcs
3. Rear mounting L-bracket x 1 pair

   *T1700 series mounting depth-adjustable from 395 to 880mm
4. 3-in-1 KVM cable x 1 pc
5. Power cord x 1 pc

T1900

1. LCD KVM drawer x 1 pc
2. Single or “one man” installation slides x 1 package
3. 3-in-1 KVM cable x 1 pc
4. Power cord x 1 pc

Structure Diagram



1. Carry handle to release the 2-pt lock
2. 2-point lock
3. LCD screen
4. LCD membrane
5. Adjustable rear mounting L-bracket
6. Micro switch for screen auto power off
7. Keyboard
8. Touchpad

Chapter 2 Installation

In This Chapter

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How to Install "One Man" Installation Slides 6
Connecting to the KVM Switch via PS/2 Interface 10
Connecting to the KVM Switch via USB Interface 11
Connecting to the Server via PS/2 Interface 11
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Before Installation

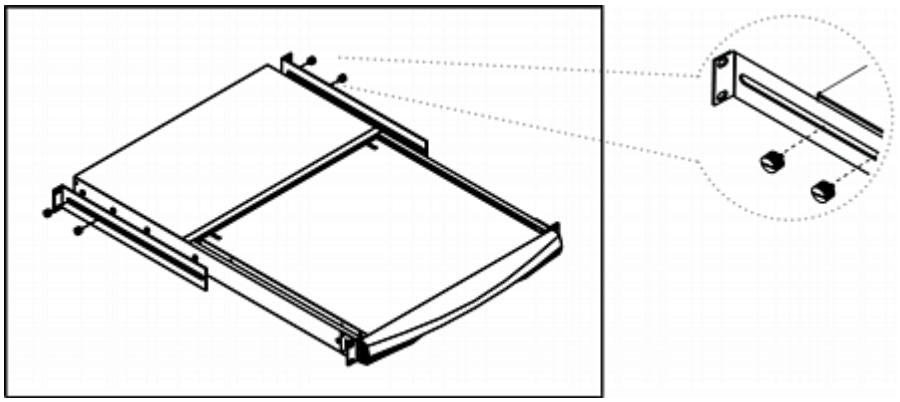
- It is very important to locate the LCD KVM Console in a suitable environment.
- The surface for placing and fixing the LCD KVM Console should be stable and level or mounted into a suitable cabinet.
- Make sure the place has good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture, and vibration.
- Convenience for connecting the LCD KVM Console to the related facilities should be well considered too.

Rack-Mounting the LCD KVM Console

There are three major steps to rack-mount the LCD KVM Console.

1. Install the rear L-bracket to the LCD KVM Console.
2. Align the rear L-brackets to a suitable length for the rack.
3. Fix the LCD KVM Console into the rack.

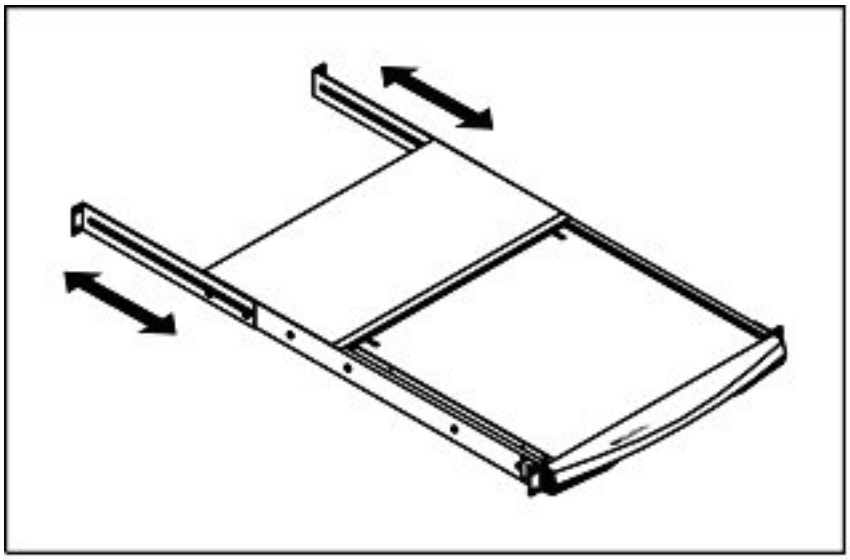
1. Installing the Rear L-bracket



a. Install each rear L-bracket using two fasteners shown in the diagram.

b. Leave the fasteners slightly loose.

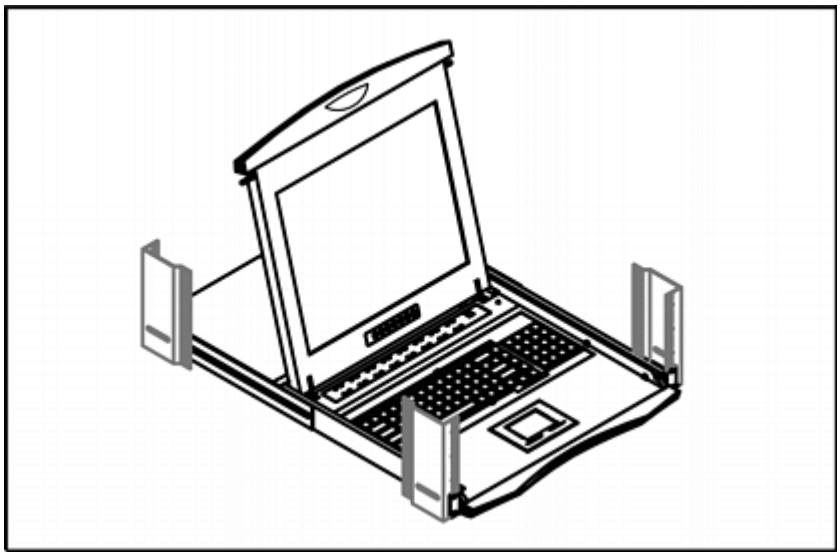
2. Aligning the Rear L-brackets



a. Measure the front and rear mounting depth of the rack.

b. Align each rear L-bracket to a suitable length and tighten the fasteners shown in the diagram.

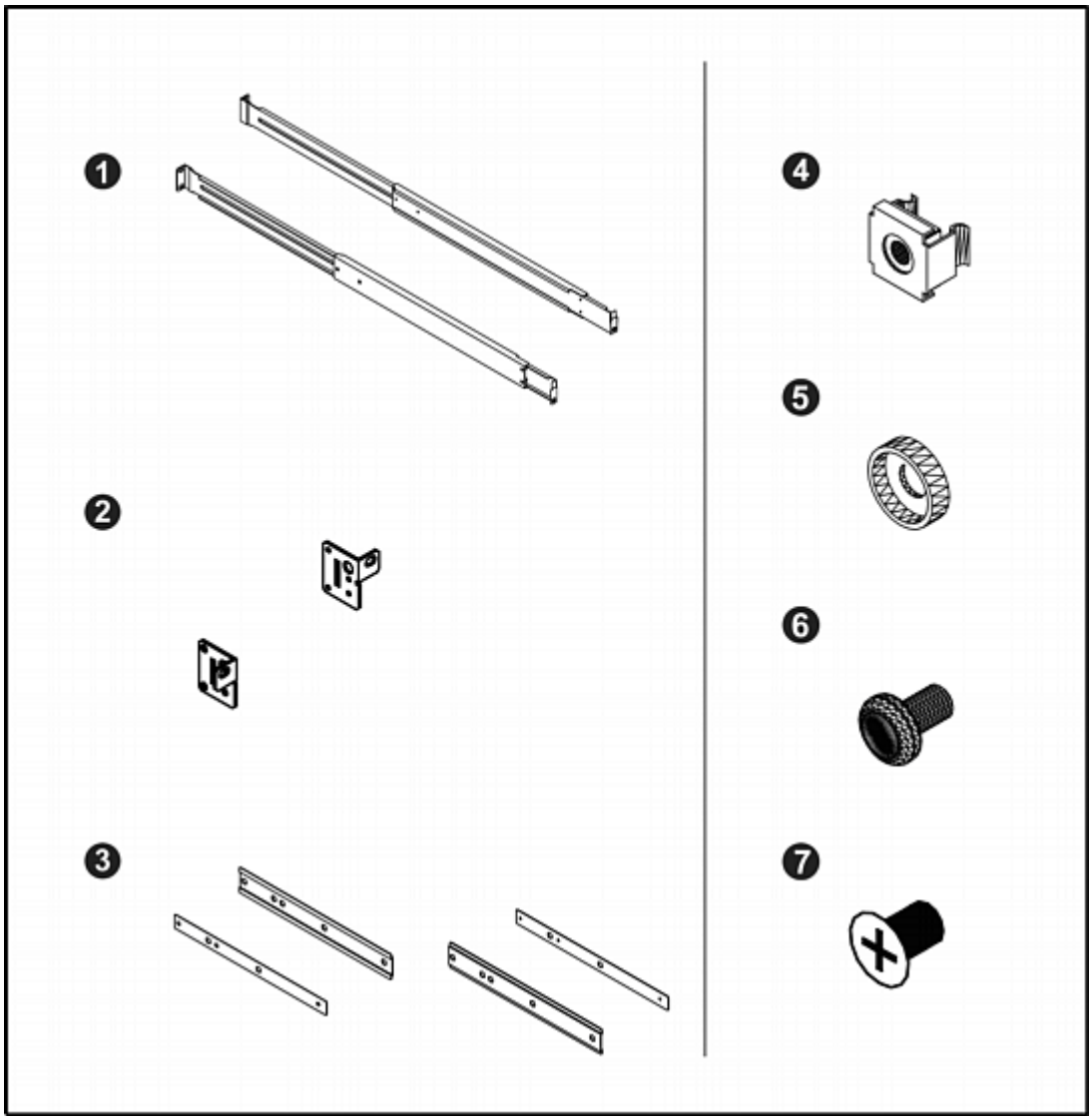
3. Fixing the LCD KVM Console into the Rack



- Fix the LCD KVM Console into the rack.

Note: Hardware (screws and cage nuts) for fixing the mounting bracket into the rack is not provided.

How to Install "One Man" Installation Slides

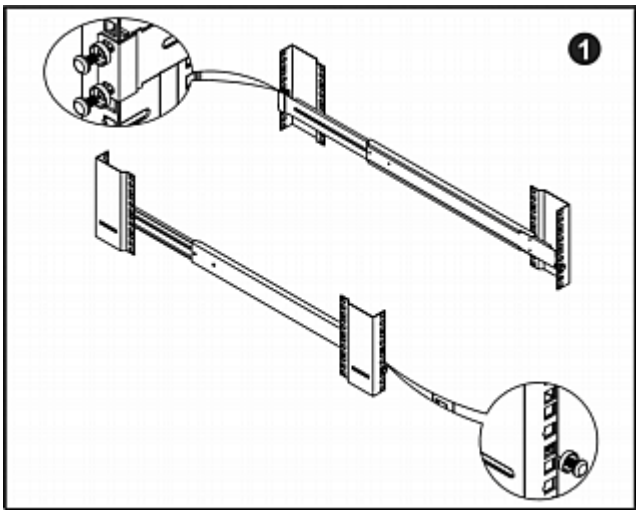


Component list	
1	Mounting bracket x 2 pcs
2	Front mounting ear (left & right) x 2 pcs
3	Support bracket x 4 pcs
4	M6 cage nut x 6 pcs
5	M6 washer x 8 pcs

Component list	
6	M6*15mm screw x 8 pcs
7	M3.2*4.5mm screw x 14 pcs

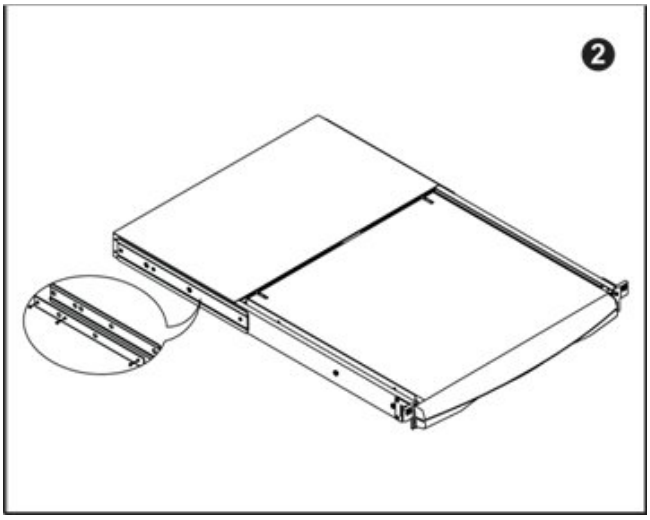
Note: Components 2, 3 and 7 have been pre-installed onto the T1900 LCD KVM Console and therefore are not in the component pack.

Installing into Rack



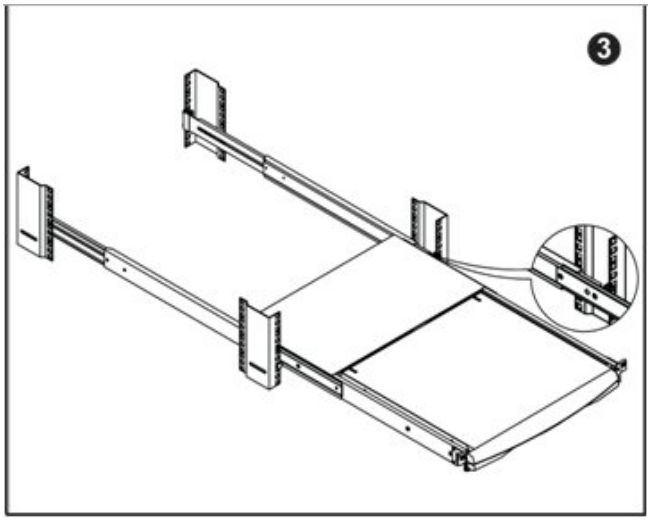
- Attach the mounting bracket to vertical mounting rails.
- Adjust the rear mounting bracket to fit your rack.
- Repeat the above steps for the other side.

Caution: Leave the screws slightly loose (not release).



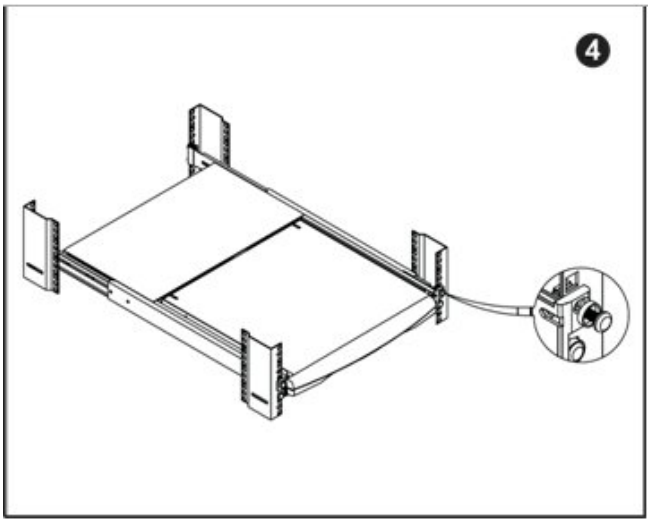
- Attach support brackets to chassis with M3.2*4.5mm screw x 3 pcs.
- Repeat the above step for the other side.

Note: You can ignore step 2 because the support brackets have been pre-installed onto the T1900 LCD KVM Console.

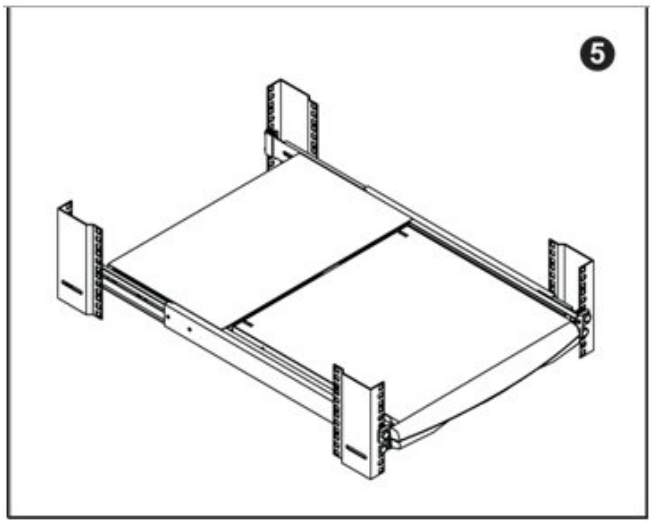


- Pick up the chassis.
- Insert inner members of slides into the already mounted internal slide members in the rack.
- Push the white-arrow button on each slide that is installed on the LCD keyboard drawer to unlock (Push at the same time).

Caution: Be careful when pushing the chassis into the left and right slides. Avoid pressing the red button located on either side of the slide.



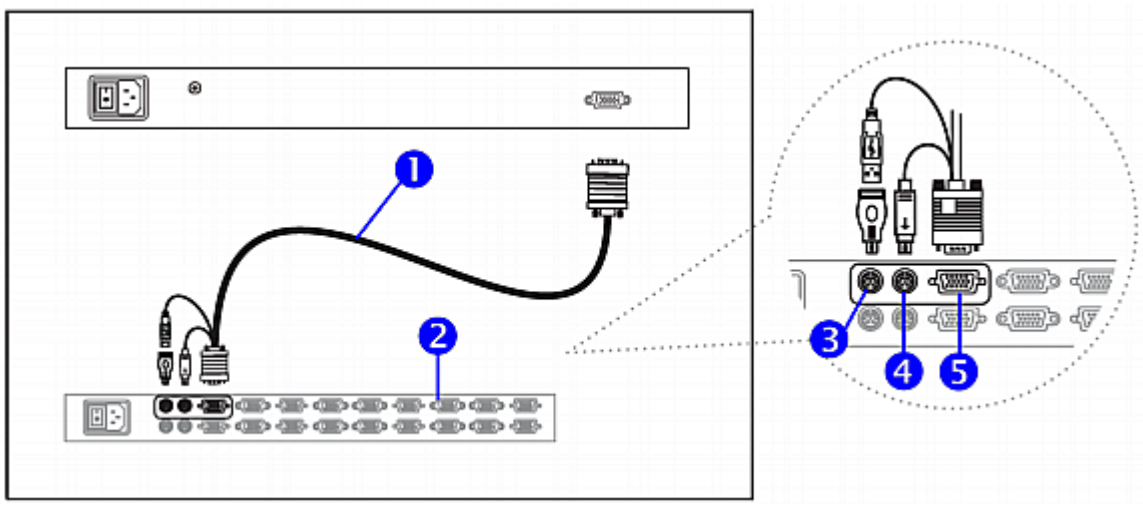
- Hold down the white-arrow button and push the chassis to the end.
- Attach left and right mounting ears to vertical mounting rails.
- Tighten the screws on both sides.



- Installation completed.

Connecting to the KVM Switch via PS/2 Interface

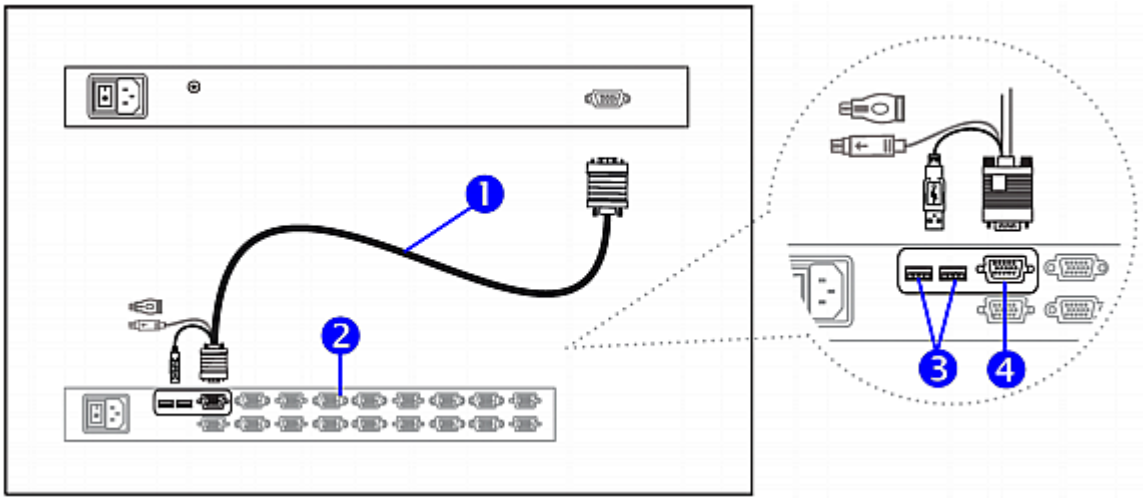
This is an illustration of connecting the 3-in-1 KVM cable to the KVM switch via PS/2 Interface.



1. 3-in-1 KVM cable
2. KVM switch
3. Keyboard port
4. Mouse port
5. VGA port

Caution: The LCD KVM Console is hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM switches are powered on may cause irreversible damage to the servers, KVM switches and LCD KVM Console. Before attempting to connect anything to the product, we suggest turning off the power to all devices. Apply power to connected devices again only after the LCD KVM Console is receiving power. The company is not responsible for damages caused in this way.

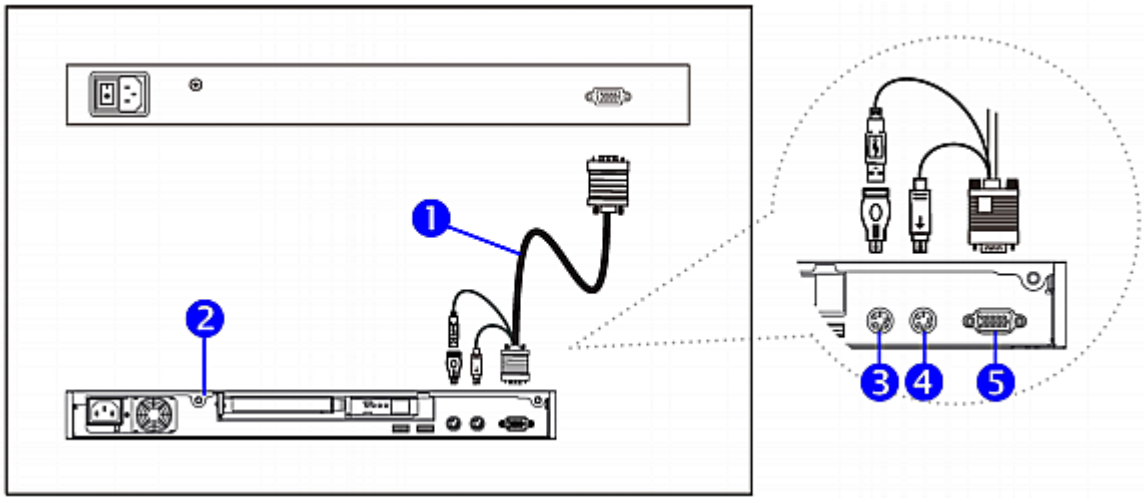
Connecting to the KVM Switch via USB Interface



1. 3-in-1 KVM cable
2. KVM switch
3. USB ports
4. VGA port

Connecting to the Server via PS/2 Interface

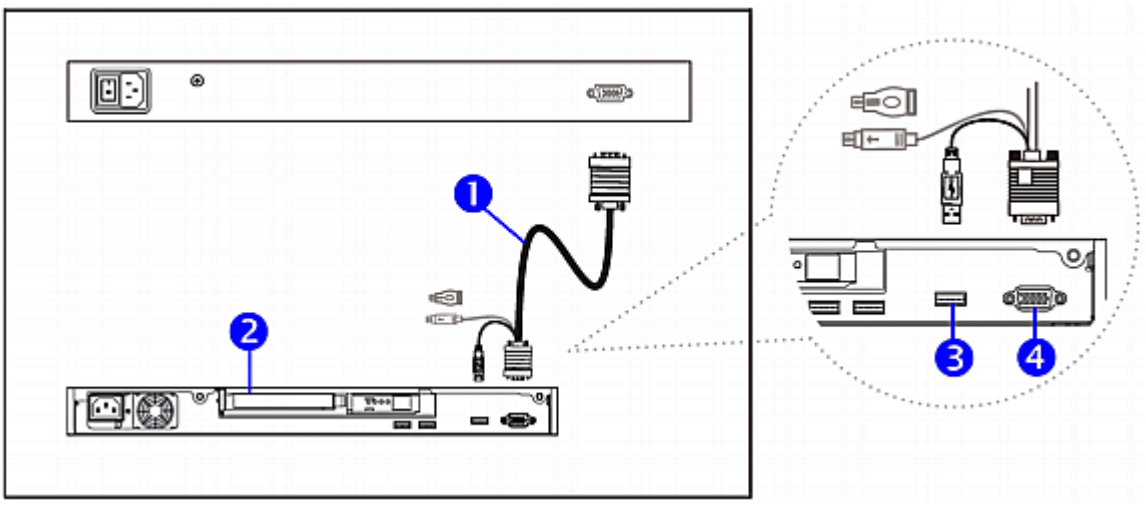
This is an illustration of connecting the 3-in-1 KVM cable to a server via PS/2 interface.



1. 3-in-1 KVM cable
2. Server

3. Keyboard port
4. Mouse port
5. VGA port

Connecting to the Server via USB Interface



1. 3-in-1 KVM cable
2. Server
3. USB port
4. VGA port

Chapter 3 Operation

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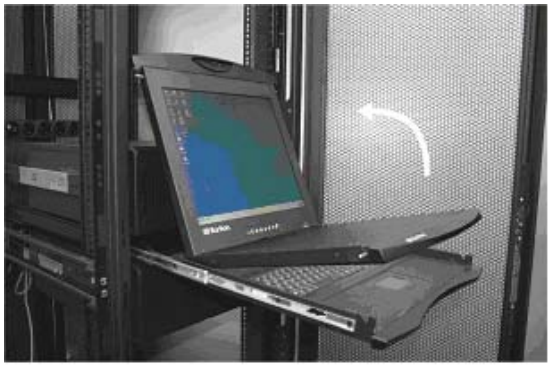
How to Use the LCD KVM Console

1. Gently pull the tab toward the front of the LCD.

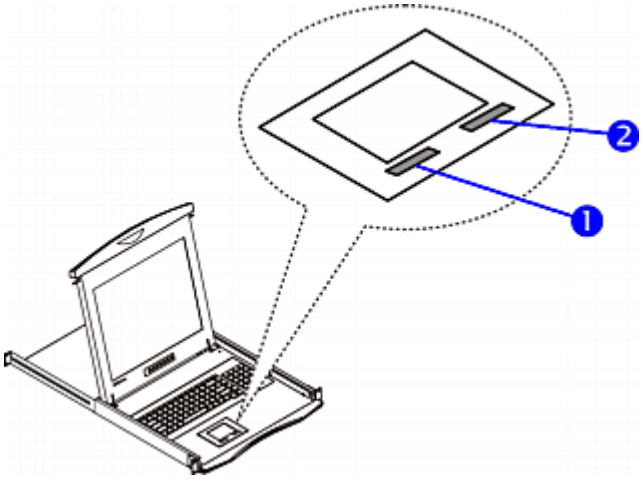
2. Flip up the LCD to a suitable angle.



3. Operate the LCD KVM Console. For information on LCD membrane buttons and onscreen menu, see ***Onscreen Display Operation*** (see "***LCD Membrane***" on page 16) and Onscreen Menu.

Touchpad Buttons

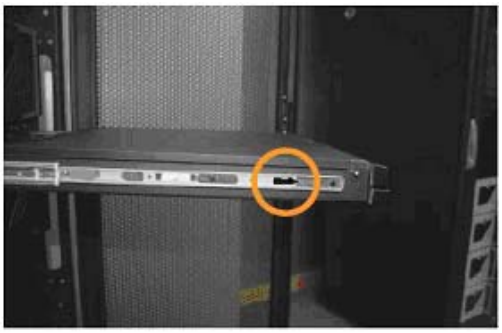
The buttons adjacent to the touchpad function the same as those on a two-button mouse.



Number	Function
1	The button is similar to the left button on a mouse, which is used for item selection or program activation.
2	The button is similar to the right button on a mouse, which can trigger a context menu.

How to Use the Slides

1. Locate a black-arrow release button on the outside of each slide.



2. Push the black-arrow buttons at both sides before pushing the LCD KVM Console into place.

3. Keep pushing the black-arrow buttons until the LCD KVM Console is placed into the rack.

Chapter 4 LCD Panel Operation

You can customize visual display properties of the built-in LCD display, such as colors and image position, by changing the settings on the LCD OSD menu.

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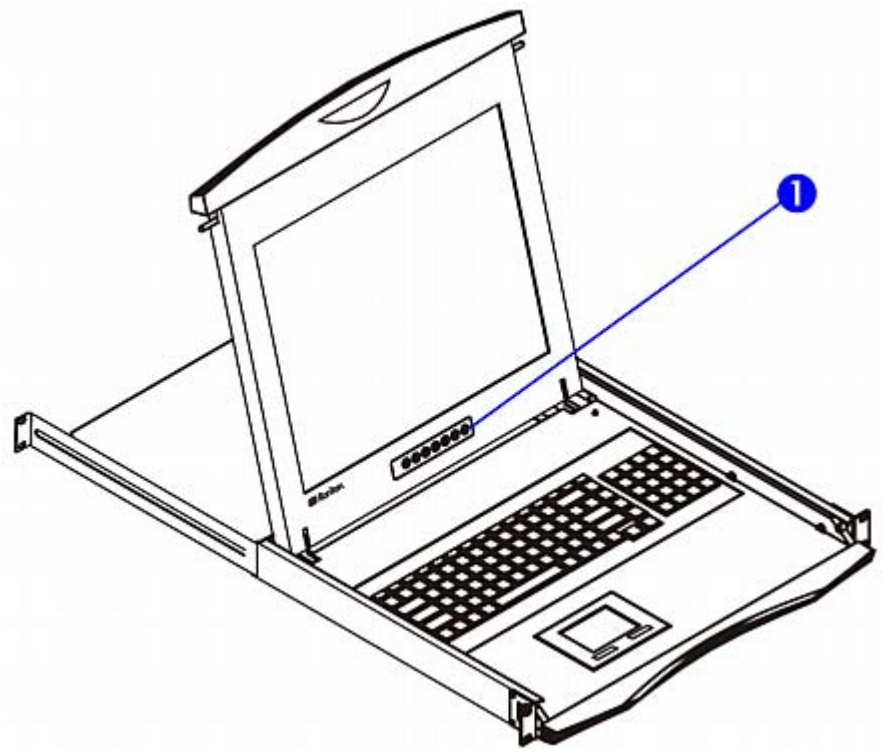
LCD Membrane



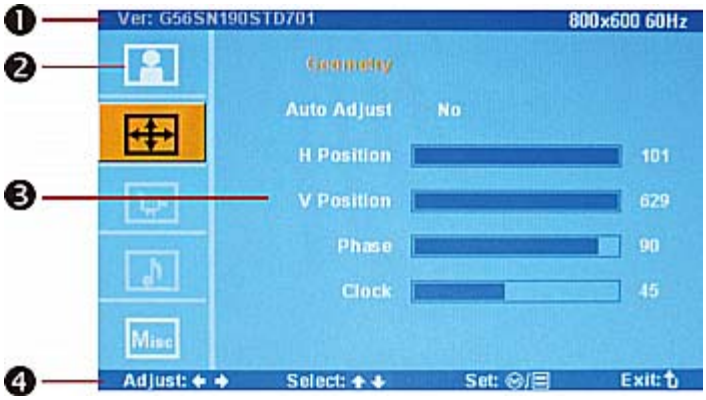
1. LCD membrane

The buttons at the bottom of the LCD panel are used to control the LCD display and navigate through the LCD's OSD interface.

Button	Function
	Turn on/off the LCD display. ▪ Adjacent LED turns blue when turned on. ▪ Adjacent LED is *not* lit when turned off.
	Two functions: ▪ Activate the LCD's OSD interface. ▪ Confirm the current selection when an OSD menu or field is highlighted.
	Two functions: ▪ Move the highlight on the LCD OSD menu. ▪ functions as a shortcut button to auto-adjust visual display settings without activating the LCD's OSD interface.
	Adjust the value or switch among available options after any OSD field is selected.
	Exit from current LCD OSD menu or submenu.

LCD OSD Layout

You can view the LCD information, and adjust the visual images displayed and the LCD OSD properties through LCD OSD menus.



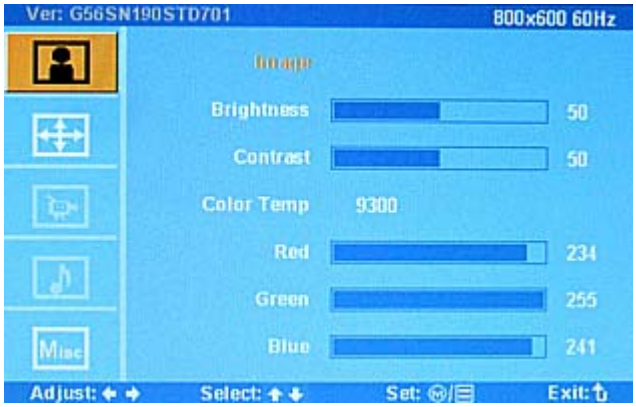
Number	Information	Description
❶	OSD title	The bar shows the LCD version, and the resolution and refresh rate applied to current video image.
❷	Submenu section	The left column shows the OSD submenus. Only three submenus are available: Image, Geometry, and Misc.
❸	Setting section	The right column shows the fields available in the selected submenu.
❹	Help bar	The bar shows the buttons that work with the LCD OSD menu.

OSD Submenus

Only three submenus are enabled for LCD KVM Console: Image, Geometry, and Misc.

Image

This submenu determines how the screen image is displayed.



- Brightness: Adjust background black level of the screen image.
- Contrast: Adjust the difference between the image background (black level) and the foreground (white level).
- Color Temp: The screen color is not user-configurable -- always at 9300K.
- Red: Adjust the red color.
- Green: Adjust the green color.
- Blue: Adjust the blue color.

Geometry

The submenu controls geometry, clock and phase settings.

- Auto Adjust: Fine tune the video signal to eliminate waviness and distortion. The "Auto Adjusting" message is displayed during the process.
- H Position: Align the screen image left or right.
- V Position: Align the screen image up or down.
- Phase: Adjust the phase setting.
- Clock: Adjust the clock setting.

Misc

This submenu provides other OSD or screen settings, and the reset function.

- Language: Select the language in which the LCD's OSD interface is displayed.
- OSD Position: Determine the position of the LCD OSD on the screen.
- Display Mode: Adjust the LCD display's video resolution.
- OSD Time: Set the time duration in seconds that the LCD OSD is visible after the last time any button of the LCD controls is pressed.
- Ratio: Adjust the screen image's ratio.
- Reset: Restore the LCD OSD settings to factory defaults.

Changing LCD OSD Settings

Follow this procedure to change the settings on the LCD OSD menu.

To change the OSD settings:

1. Press . The LCD OSD menu appears.
2. Press or to select the submenu (icon) you want, and press to confirm. When a submenu is selected, it is highlighted in orange.
3. Press or to select the field whose value or option you want to change. When a field is selected, it is highlighted in blue.
4. Press or to adjust the value or switch among available options.
5. To adjust more fields on the same submenu, repeat Steps 3 to 4.

   Note: Some settings like the Display Mode field may close the LCD OSD menu after changing the option or value. If so, start from Step 1 if you want to change other LCD OSD settings.

6. Press to quit the current submenu.
7. To adjust the settings on the other submenus, repeat Steps 2 to 6.
8. Press to quit the LCD OSD menu.

Auto-Adjusting Display Settings

Instead of customizing the LCD display settings manually, you can have the LCD automatically configure all visual settings according to the video signals it receives.

There are two ways to perform the auto-adjustment function: the UP botton on the LCD control or the LCD's OSD interface.

To auto-adjust visual display settings using a button:

1. Ensure you have accessed a channel, and the LCD OSD menu is not displayed on the screen.
2. Press .

A message "Auto Adjusting" is displayed on the screen, and the screen flickers momentarily until it finds the ideal profile.

To auto-adjust visual display settings using the LCD OSD:

1. Press . The LCD OSD menu appears.
2. Press or to select the Geometry submenu, and press to confirm.
3. Press or to select the Auto Adjust field.
4. Press or to select the option, Yes, and then press to confirm.

A message "Auto Adjusting" is displayed on the screen, and the screen flickers momentarily until it finds the ideal profile.

Resetting LCD OSD Settings

You can restore all of LCD OSD settings to factory defaults at any time.

To reset OSD settings:

1. Press . The LCD OSD menu appears.
2. Press or to select the Misc submenu, and press to confirm.
3. Press or to select the Reset field.
4. Press or to select the option, Yes, and then press to confirm.

Important: You must press *in this step, or the reset function is not performed.*

5. Press twice to quit the LCD OSD menu.

If you change any LCD OSD settings after finishing Step 4, the later changes are not reset.

Quitting the LCD OSD Menu

The LCD OSD menu automatically disappears if there is no activity from the LCD control for the period of time specified in the "OSD Time" field (usually 8 seconds by default). You can also manually exit from the LCD OSD menu whenever you want.

To exit from the OSD manually:

- Press once or several times until the LCD OSD menu disappears.

Appendix A Standard Specifications

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Specifications

Item	Description	
	T1700	**T1900**
Form Factor	1U rack mounting on slide-out rails	
Diagonal Size	17" TFT	19" TFT
Max. Resolution	1280 x 1024	
Brightness (cd/m²)	300	
Color Support	16.2 Mil.	16.7 Mil.
Contrast Radio (typ.)	700:1	1000:1
Viewing Angle (H/V)	150° x 135°	
Display Area (mm)	337 x 270	376 x 301
Tr Response Time (ms)	2	1.3
LCD Panel MTBF (hrs)	N/A	50,000
VGA Signal Input	Analog RGB, 0.7Vp-p	
Sync. Type	Separate H/V, Composite, SOG	
Resolution	640 x 350, 70Hz	
	720 x 400, 70Hz	
	640 x 480, 60 / 72 / 75Hz	
	800 x 600, 60 / 70 / 72 / 75Hz	
	1024 x 768, 60 / 70 / 72/ 75Hz	
	1152 x 864, 60 / 70 / 75Hz	
	N/A	1152 x 900, 66 / 76Hz

Item	Description	
	T1700	**T1900**
	1280 x 1024, 60 / 70 / 75Hz	
Plug & Play DOC	EDID 1.3	
Console Port (Combo)	3-in-1 DB-5 connector for VGA / keyboard /mouse Support USB & PS2 servers or KVM switches	
Power Input	Auto-sensing 100 to 240VAC, 50 / 60Hz	
Power Consumption	Max. 40 Watt, Standby 5 Watt	
Compatibility	Multi-platform - Mix PCs, SUNs, IBMs, HPs & DELLs.	
Regulation Approval	FCC, CE, UL	

Dimension

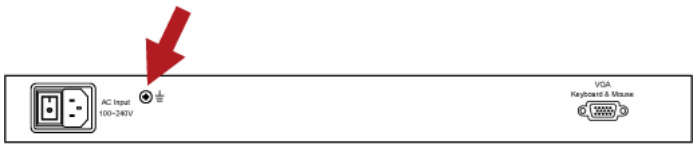
Model	Product Dimension (W x D x H)	Packing Dimension (W x D x H)	Net Weight	Gross Weight
T1700	442 x 650 x 44 mm 17.4 x 25.6 x 1.73 inch	589 x 826 x 168 mm 23.2 x 32.5 x 6.6 inch	16 kg 35 lb	23 kg 51 lb
T1900	442 x 650 x 44 mm 17.4 x 25.6 x 1.73 inch	589 x 826 x 168 mm 23.2 x 33.7 x 6.6 inch	17 kg 37 lbs	23 kg 51 lbs

Appendix B Ground Screw

If you want to prevent any electrical shock, you can use the ground screw on the rear panel to provide a safe electrical path to the ground.

To prevent any potential shock hazard:

- Connect the ground screw to a wiring system or wiring device.



Appendix C Troubleshooting

- **How do I adjust the resolution?**

  To change monitor resolution, choose Start > Control Panel > Display. Select the Setting tab to adjust the monitor resolution in Desktop Area. Available resolutions, including "640 x 480", "800 x 600", "1024 x 768", "1152 x 864", and "1280 x 1024", are determined by the display card in your computer.

- **Is interference signal that appears on LCD normal when shutting down the computer?**

  In rare cases, interference may appear on the monitor. This may be caused by signal rate of VGA card and is considered normal. The image quality can be improved by adjusting the phase or pixel rate automatically or manually.

- **The membrane button power light is not ON**

  - Press the power On / Off button on the LCD membrane to check if the monitor is in the ON mode.
  - Check whether the power cord is properly connected to the LCD KVM Console and power outlet.

- **Screen image is not centered or sized properly**

  - Press the button for two seconds to automatically adjust the image.
  - Adjust the H-position and V-position settings via the onscreen LCD OSD menu.

- **Is the Raritan LCD KVM Console hot-pluggable?**

  The LCD KVM Console is hot-pluggable, but components of connected devices, such as servers and KVM switches, may not be hot-pluggable. We suggest turning off the power to all devices before connecting them. Apply power to connected devices again only after the LCD KVM Console receives power.

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